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SMALL CASSIDIDAE OF FLORIDA AND THE WEST INDIES

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Our small and relatively light species of Cassididae, not humped on the back or with an extended callus over the face, the columellar lip granulose and standing free, belong to the genus *Semicassis*. Dead shells are not uncommon on Florida and Texas beaches, but living specimens are harder to come by, as they burrow in the sand with only a small part of the shell exposed. As several names appear to be in use for our common species, the authors spent some time in going over the early literature, with the following results.

An astonishing number of names were proposed for these small *Cassis*, most during the XVIII century, and by authors such as Gmelin and Röding, who merely named figures in the still older iconographies, or by others who had real shells, but depended on the old works for figures. Tryon in the Manual of Conchology lumped the Mediterranean, West Indian and West American forms under *Cassis sulcosa* Brug., with var. *inflata* Shaw and var. *abbreviata* Lam.; but his synonymy was confused and the references to figures misleading.

Finally, it has to be admitted that although the great majority of shells can easily be referred to one or another of the forms named below, there seem to be also some transitional forms which refuse to be rigidly classified. Our object here is to point out the proper names for the several prevalent forms, whatever their status.

A west Mexican species of this group is SEMICASSIS CENTIQUADRATA Valenciennes, which was figured by Reeve as a form of *Cassis abbreviata* Lam., a very different thing.

SEMICASSIS GIBBA (Gmelin). Plate 5, figs. 1, 2, 3.

Buccinum gibbum Gmelin, 1791, Systema Naturae (13), p. 3476.
Cassis sulcosa and *Cassis inflata* of some authors.
Cassis malum, C. cepa and *C. globulus*[1] Röding, 1798, Mus. Boltenianum p. 31.

The oval shell with rather acuminate spire is shell pink to nearly white, with six series of squarish cinnamon spots, those at suture and extreme base often smaller, irregular or weak. It is deeply grooved spirally, the moderately convex or sometimes nearly flat raised cords being very much wider than the grooves, 17 to 19 on the last whorl, the second one from the suture generally narrow. The upper four or five cords generally are crossed by narrow tubercles, but these may be weak or practically absent. In large numbers seen from many localities, a few have a varix preceding that at the lip by about a whorl, more or less.

Large specimens (from Beaufort, N. C., and Lake Worth, Fla.) run from 75 to 80 mm. long. The common size is 60 to 65 mm., small ones down to 35 to 40 mm.

Specimens seen are distributed from Beaufort, N. C., along the Atlantic and Gulf coasts to Tabasco, Mexico. We have not seen it from the northern coast of the Gulf in Alabama, Mississippi and Louisiana, but this may be due to insufficient collections from those states. A series from St. Thomas is in the Swift collection.

SEMICASSIS GIBBA ABBREVIATA Lamarck. Plate 5, fig. 4.

Cassis abbreviata Lamarck, 1822, Anim. sans Vert. 7: 224.

This shell is similar to *S. gibba* but always small, length about 33 to 44 mm., very solid, nearly white with faint spots or none, with narrow axial folds crossing the spirals throughout. There is frequently a strong varix on the front of the last whorl.

A specimen from Varadero Park, on the north coast of Cuba, is figured. It occurs also on Boynton Beach and probably on the Keys, Florida. A rather dubious "subspecies," being based on size and solidity.

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[1] *Cassis globulus* was based upon Lister's plate 999: 64 (to which we now restrict it; this is the type figure of *B. gibbum* Gmel.), and also figures in Martini which are either small *C. gibba* or *abbreviata*, but not sufficiently characteristic for certain identification.

SEMICASSIS GIBBA INFLATA (Shaw).

Buccinum inflatum Shaw, 1811, Naturalists Miscellany, 22, pl. 959. (Figure reversed by engraver.)

Cassis inflata Shaw, Reeve, Conch. Icon. pl. 9, f. 22*c* (only).

Cassis tessellata Pfeiffer, 1840, Krit. Register zu Martini u. Chemnitz's Syst. Konchyl.-Kab. p. viii.

This capacious shell is the largest West Indian *Semicassis.* Shaw's figure said to be natural size, is about 108 mm. long. The largest we possess is 99 mm. It varies from oval to subglobose, the diameter from 63 to 77 per cent of the length. The spiral sulcation is weak on the convexity of the last whorl, but strong above and below it. There is no trace of a corona of tubercles at the shoulder. Occasionally there is a varix near the beginning of the last whorl or on its left side. We have not seen specimens transitional to *gibba.*

Specimens are in the collection of the Academy from St. Thomas, Tortola and Barbados, but none have been seen from Florida.

SEMICASSIS CICATRICOSA (Meuschen). Pl. 5, fig. 6.

Buccinum cicatricosum Meuschen, 1781, in Zoophylacium Gronovianum, Tabl. Explic. p. v, pl. 19, f. 1, 2.

Cassis laevigata Menke, 1830, Synopsis Meth. Moll., p. 144, (Barbados), may well be considered a synonym of *S. cicatricosa* unless the type shows it to differ. Not figured.

Buccinum recurvirostrum Gmelin, 1791, p. 3477, based solely on Lister, 1016: 75, (Barbados), appears to be a synonym of *S. cicatricosa.* Reeve has used the name *Cassis recurvirostrum* Wood for an Australian species.

With about the shape of *S. gibba,* this shell differs by the nearly smooth surface. There are very weakly raised narrow spirals, fewer than the spirals of *gibba,* with wide, flat, "malleate" intervals on the last whorl; merely engraved lines on the spire.

The figured specimen is one picked up on the beach at Georgetown, Grand Cayman Island. Occurs also on Guana Key, Aabaco group, Bahamas. We do not know that it has been found in Florida, but it is to be expected there. The name *cicatricosa* refers to the scarlike impressions of the surface.

Semicassis cicatricosa peristephes, new subspecies. Pl. 5, fig. 5.

With the general proportions of *S. gibba,* this shell has a shoulder bearing pointed tubercles, of which about 16 can be counted on the last whorl. It appears also on the back of the penult whorl. The flat upper face of the later whorls has four granulous cords. A short distance below the shoulder the glossy surface shows extremely weak hardly raised spirals equal to their shallow intervals, or near the base about four spiral grooves separated by flat intervals. There is also some irregular axial wrinkling or folding of the surface over the middle and anterior parts. The coloration resembles that of *S. cicatricosa:* on a pale cinnamon-pink group there are irregular large and small cinnamon (darker or lighter) spots below the suture, some small spots along the shoulder, and three spiral series of small squarish or sometimes twinned spots on the middle and forward. There are also the usual dark spots behind the recurved lip weakly continued on the outer callus. Aperture about as in *S. gibba;* 20 ridges within the outer lip.

Length 44.6 mm., diam. 31 mm. Lake Worth, Florida. Type.
Length 38 mm., diam. 26 mm. Varadero Park, Cuba.
Length 36 mm., diam. 25 mm. St. Kitts, B. W. I.

Sand bar of Peanut Island, northern inlet of Lake Worth, together with *S. gibba.* Type 173344 ANSP., collected by Thomas L. McGinty.

It is a beautiful shell, rare in Lake Worth, and apparently found throughout the West Indies. It occurs on Guana Key, Abaco group. In a series from St. Thomas there is one shell transitional to *S. cicatricosa.* (*Peristephes,* crowned.)

There remain a number of ancient names for forms of the *S. gibba* group, based upon figures in Lister, Knorr, Chemnitz and others, which have been variously identified by different authors. No general agreement on these is to be expected, as one guess at such enigmatic figures is about as good as another. The names had better be dropped.

Buccinum granulatum Born, 1780, Test. Mus. Caes. Vindob. p. 248, was not figured, but in the synonymy Born cites the figure of an Amboina shell in Rumphius, and two quite different figures in Chemnitz[2] perhaps representing a West Indian shell. Born's description reminds one of *S. inflata* Shaw, as he says it is transversely obsoletely sulcate; but it seems impossible to tell just what

[2] Küster referred Chemnitz's figures to *Cassis inflata* Shaw.

he described unless his type can be found in Vienna. He gave the localities Mediterranean Sea and Amboina.

Buccinum bilineatum Gmelin, 1791, was based upon an unlocalized figure in Lister, which has some resemblance to our *peristephes,* but it is not possible to tell whether the markings at shoulder are knobs or color spots, the bilineate pattern is unlike any *peristephes* seen, and spiral sulcation is represented as distinct throughout. It does not seem sufficiently definite for consideration.

Buccinum trifasciatum Gmelin, 1791, refers to a rough, foreshortened engraving of some form of the *S. gibba* group. It had better be given up as inadequately defined.

Buccinum undulatum Gmelin, 1791, rests upon Lister's 996: 61, labeled Barbados. It is a large form which can hardly be anything else than *inflata* Shaw; yet the figure is so poor that it does not seem wise to adopt the name in place of *inflata,* especially as some authors have used the name *C. undulata* for the Mediterranean shell. See Buquoy and Dautzenberg, 1882, Moll. Mar. Roussillon 1: 66, pl. 7, f. 3, 4.

Cassidea sulcosa Bruguière, 1792, probably comprised the preceding as well as some other forms. It has often been used for *S. gibba,* but besides some doubt as to exactly what Bruguière had, the name is later than *gibba.*

Buccinum testudo Solander, of the Portland Catalogue, 1786, which Dall marked "+*Cassis sulcosa*" (Nautilus 34: 98), was based on figures of a very different *Dolium* (*Tonna*), not a *Cassis.* We do not know what Dall intended by the plus sign.

NOTE ON THE TYPE OF *HELIX (HELICOGENA) GILVUS* FÉRUSSAC

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In July, 1925, I had opportunity to study the type specimen of *Helix gilvus* Fér.[1] in the collection of Férussac types in the Museum d'Histoire Naturelle, au Jardin des Plantes, in Paris. Through the courtesy of the Museum authorities I was able to examine this type carefully. It is a unique specimen, perfectly preserved, on its original tablet. As soon as I saw it I realized

[1] *Helix* (*Helicogena*) *gilvus* Férussac, 1821, Tabl. Syst. Fam. Limaçons p. 29, No. 36 (no description or locality). Hist. Nat. Moll. Terr., Fluv., pl. 21 B, f. 1; Expl. Pl. Suppl. 1822, p. ii.